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BY

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THE BATH MINERAL WATER IN THE TREATMENT OF DISEASES OF THE SKIN.

BY R. A. BAYLISS, M.R.C.S. (ENG.), L.R.C.P. (LOND.)

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IT seems to me that, up to the present time, not sufficient notice has been taken of the Bath Mineral Water as a therapeutic agent in the treatment of diseases of the skin. In the many excellent works on the healing properties of these thermal springs, whilst great stress is laid on their beneficial action in rheumatism, gout, and the allied diseases, and minute directions are given as to their administration, affections of the skin are, as a rule, dismissed with but a few words. I may perhaps, therefore, be pardoned for broaching the subject, and for recording the results of my experience gained during the time I was Resident Medical Officer at the Royal Mineral Water Hospital, and subsequently in my private practice.

There is no doubt that from the earliest times the waters of Bath were highly esteemed as a curative agent in cutaneous affections, and if we are to believe the myth, which attributes to the cure of Prince Bladud's leprosy the subsequent foundation of the City of Bath, we have, at any rate, antiquity in our favour.

In the Board Room of the Royal Mineral Water Hospital there is a painting by William Hoare, dated 1742, representing Dr. Oliver and Mr. Peirce, physician and surgeon respectively, examining three cases of paralysis, rheumatism and leprosy, these patients evidently being pourtrayed in order to depict the chief types of disease which frequented the Hospital, and came under treatment at that time. On the other hand, I find on reference to the Hospital Reports for the past decade, that but a small proportion of the patients have been admitted suffering from skin complaints, from which it would appear

that latterly, at any rate, the Bath Waters have not been so much in favour in this class of case. Whether this is due to fashion, which in medicine, as in everything else, always has its votaries, or whether it is due to the improved methods of treatment by internal and local medication, it would be difficult to say. Be that as it may, it is my object in this article to show that, in the thermal springs of Bath, we have a valuable adjunct to other forms of treatment in cases of diseases of the skin.

We will first consider very briefly the composition of the Bath Waters, and the physiological action derived from their use, both externally and internally. Without entering into a long description of them, I think, for the present purposes, we may state that their three salient features are : (1) their heat ; (2) their saline constituents, and (3) the gases they contain. With regard to their heat, it may be said that the temperature of the water, as it issues from the springs, varies from about 114° to 118° F. The total quantity of mineral matter they contain amounts to 165·927 grains per gallon (*Lancet*, Analysis of King's Bath Spring), and consists of sulphates of calcium, strontium, sodium and potassium, chlorides of magnesium, sodium and lithium, carbonates of lime and iron, with traces of a few other salts. The gaseous constituents comprise carbonic acid gas, oxygen and nitrogen, the last named being in by far the largest proportion, and in addition the two rare elements, argon and helion.

On immersion in a mineral water bath there is, of course, the usual feeling of warmth, similar to that experienced on getting into any hot bath, but in addition there is, as has been described, a sort of tingling sensation, which comes on after a time, and is both agreeable and soothing. The heart's action is at first accelerated, but after a few minutes it is slowed, the beats being full and steady, and the cardio-vascular tension becomes generally lowered. There is considerable determination of blood to the surface, the skin appears redder than usual, and on the parts of the body not immersed, viz., the head and neck, a variable amount of sweat is discernible. On leaving the bath a pleasurable glow is experienced, and whilst rest-

ing afterwards, perspiration becomes general and at times profuse.

The therapeutic value of such a bath from a dermatological point of view is both interesting and important, and it is only with regard to its effects on the skin that I propose to consider it here. The effect of the heat alone has a sedative action on the peripheral nerves, which have been kept in a state of more or less continuous stimulation, the outcome of the chronic irritation arising from the morbid cutaneous condition. This effect lasts for some time after leaving the bath, and is in itself a great source of comfort to the suffering patient. The determination of the blood to the surface causes an increased flow through the dermal capillaries, and produces a flushing (as it were) of the surrounding structures, carrying off much morbid material, and at the same time stimulating the tissues to a healthier action. Apart from this there is no doubt that the saline constituents of the water have a most beneficial action on certain diseased conditions of the skin. As to how this is definitely produced it is difficult to say, though the alkalinity of the water is doubtless an important factor in producing a solvent action on the effete epithelial products. That this property is enhanced by the presence of the gaseous elements in the water is also most probably correct.

"Our knowledge of the action of these gases on the human organism is small, but there would seem to be but little doubt that they do exert considerable power, whether by mechanical action on the peripheral nerve-endings and cutaneous vessels or by absorption, is uncertain." (Report of the *Lancet* Special Commission on Bath as a Health Resort, October 14, 1899.)

Taken internally, in quantities varying from 12 to 20 ozs. per diem, the mineral water is a useful therapeutic adjunct to a course of baths. The digestive organs are stimulated by the inhibition of the hot water causing increased secretion of their several juices, intestinal peristalsis is promoted, as also is diuresis, and an increased elimination of uric acid takes place.

The reclining bath is generally the most serviceable in the treatment of skin cases, as less fatigue is caused by prolonged immersion in this kind of bath than in a deep one, the tem-

perature can be more readily regulated (owing to the smaller amount of water these baths contain) and for patients who are suffering from debility or a weak action of the heart, the semi-recumbent position is the more desirable one. The medicinal value of the bath may be varied sometimes by the addition of bran, oatmeal, sulphurated potash, pine preparations, &c. Natural vapour baths, either local or general, are also useful in some cases.

A few general hints as to the mode in which a course of baths for skin diseases should be undertaken may not here be out of place. Bathing on alternate days has long been recognised by custom and experience as sufficient, and in the main may be accepted as a workable rule. The best time for taking a bath is about the middle of the morning or afternoon, and should on no account be indulged in shortly after a meal or after prolonged fasting. The temperature of the bath may very well be commenced at 98° F., being increased to 104° or more according as the patient becomes accustomed to the heat. Fifteen minutes is a fair time for the first bath, which may be lengthened to twenty minutes and half an hour, or even more, in accordance with the particular exigencies of the case. Douching is sometimes indicated, as will be described later on, and in certain cases may to advantage be combined with massage. A loose pack following the bath for about twenty minutes is to be preferred, during which time a glassful of mineral water may be taken to aid perspiration. The patient should then quietly dress, and after spending some time in the cooling room, he may return to his residence, being very careful in so doing to avoid a chill.

It may be perhaps well to state that only a certain proportion of skin affections are suitable for treatment by the Bath waters, and great discrimination and care therefore should be exercised in selecting patients for this particular treatment, in order that the sufferer may be saved much disappointment and the mineral springs of Bath no little discredit.

Generally speaking, chronic cases are the ones most likely to derive benefit from a course of baths, any acute condition,

as a rule, distinctly contra-indicating this mode of cure. The class of case which from our experience it is found do best, are those in which the morbid action of the skin is in a somewhat passive state and the extension of the disease is very slow, or those in which, perhaps, it is even stationary. There is no doubt a good deal can be done for these.

Psoriasis, in quite a large number of cases, is completely cured by a suitable course of baths, and in many others, though the skin cannot be pronounced to be absolutely clear, yet a considerable improvement is noticed, sufficient to justify the adoption of this line of treatment. In no other skin affection, perhaps, does one get such satisfactory results as in psoriasis, and provided that the patient's general health is fairly good, and he is free from organic disease, a favourable prognosis may be given. The period of immersion in the bath for these patients may be prolonged to half an hour or more, if it is well borne, the temperature being kept at a moderate degree. Any vigorous attempts to remove the scales by rubbing is to be deprecated, though in some cases a gentle douche might be useful.

Eczema.—Patients suffering from this terrible and trying complaint often come to Bath as a *dernier ressort*, every other method of treatment, both externally and internally, having been tried elsewhere in vain. In making a prognosis in these cases, and in holding out a prospect of cure or even amelioration of the symptoms, it is no use shutting one's eyes to the fact that many cases of eczema are absolutely incurable, and not only that, but do what one may, they tend to get worse. It behoves one, therefore, to be very careful in expressing an opinion as to whether or not the Bath water will improve the sufferer's condition. As far as my experience goes, those cases most likely to do well are the ones in which the disease is (1) essentially chronic; (2) of the dry and scaly variety (3) moderately limited in area; (4) associated with some diathetic condition more or less amenable to treatment; and (5) in a subject not already worn out by the irritation, or weakened by some co-existent disease. Given these, hopes may be entertained that a course of Bath treatment will relieve

the cutaneous condition, and at the same time, the patient's general health be improved. Bathing for these, however, should be proceeded with with great caution, and at the slightest sign of increased irritation, or a renewal of any active mischief in the skin, promptly discontinued.

It is perhaps needless to state that when there is any "weeping" from the eczematous surface, or when there are obvious signs of an acute inflammatory condition of the skin, bathing is not only contra-indicated but positively harmful. Oatmeal or bran may sometimes be added to the water in the bath, enhancing its soothing effect, and sulphide of potash is a useful addition in some cases, especially those of a gouty character. Attention to the general *regimen* should not be forgotten. One may mention here a case of dermatitis exfoliativa which came under our notice some time ago in a young man, aged 20, and in which the whole surface of the body was affected, from the scalp to the soles of the feet, the scales during the night quite filling an ordinary-sized dust-pan. As a result of baths, in some of which the patient was immersed for upwards of an hour, combined in the interim by various ointments, the skin became softer, the desquamation markedly less and the general health improved; but one feared the relief was only of a temporary character.

Acne.—From time to time one is consulted by patients afflicted with this troublesome complaint, who desire relief from a course of baths. As a rule they are of the better class, who are more concerned as to their personal appearance than to any other inconvenience caused by the disease. This is a point to be borne in mind, as errors in diet and mode of life generally, occurring as they do more often amongst the well-to-do, may by being mended help much in effecting a cure. Baths for these patients should be somewhat hotter than for others, in order that free perspiration may ensue after immersion, and while in the bath the skin may be additionally stimulated by the use of the flesh brush and the douche.

The so-called *Acne Rosacea*, though in etiology and pathology entirely different from the foregoing, is oftentimes benefited by judicious bathing, according more perhaps as the

usually associated dyspepsia, uterine, or nervous symptoms are improved by it. In cases complicated by neurasthenia, occasional electric baths of mild current will add much to the efficacy of the treatment.

Urticaria.—Patients subject to this trying complaint at times seek the aid of mineral baths to assuage the irritation arising from frequent and successive attacks of the malady. In prescribing for them also it is well to bear in mind the association of rheumatism, dyspepsia and ovarian disorders with this disease, as efficient medical treatment directed to the cause in question will materially aid in the cure of the skin disturbance. Hot baths certainly act as a sedative and are soothing to the patient, and in that class of case described as "factitious urticaria" are often productive of permanent benefit. The intense itching of *prurigo* may also be allayed by frequent baths at a moderate temperature, and in the somewhat rare and inveterate form of the complaint described by Hebra, immersion in the mineral water would doubtless be a valuable adjunct to other local applications.

Ichthyosis.—In this remarkable and, in its fully developed state, rare disease, mineral water baths have a distinctly beneficial effect, the rough and thickened skin becoming soft and pliant, and the scales removed. In addition to the immersion baths, massage may be tried, either along with the Aix douche, or whilst in the bath itself. Allied to this latter affection, though a by far more serious and fortunately uncommon disease, is *scleroderma,* and though hitherto attempts at treatment have been most unsatisfactory, hot baths with shampooing of the skin might do something to relieve the distressing condition.

From the foregoing remarks it will be gathered that in certain suitable cases much may be done for affections of the skin by a carefully arranged course of baths, but it must not be inferred that at the same time all internal and external medical treatment should necessarily be entirely suspended. Many patients who come to Bath, having tried practically all known remedies and to no purpose, do very well when mineral water baths are judiciously combined with modified

medication. As a rule, these patients have used nearly every kind of external application, so it is best perhaps to order some simple emollient preparation in order to protect the skin from the action of the air.

With regard to internal drugs, arsenic in small doses may be administered if thought advisable, though at the present time it would appear that it is not regarded quite so much as a specific in skin diseases as it used to be. Tonics, including cod liver oil, maltine, petroleum emulsion, &c., may often be prescribed with advantage, anything which tends to promote a healthier condition of the system generally being of great assistance to the patient. The diet should be carefully regulated and generally speaking should be of a bland and non-stimulating kind. Gout, rheumatism and other diathetic conditions may require measures directed to them, a fact which must not be lost sight of when primarily dealing with the cutaneous affection.

In spite, however, of all our care and forethought, there must and always will be a certain percentage of cases which defy all attempts at a cure, and appear hopelessly intractable to any kind of treatment.